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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,845	06/27/2003	Patricia Arand	354458002US3	7100
56703	7590	11/15/2005		
ROBERT D. VARITZ, P.C. 4915 SE 33RD PLACE PORTLAND, OR 97202			EXAMINER ALTER, ALYSSA M	
			ART UNIT 3762	PAPER NUMBER

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,845

Applicant(s)

ARAND ET AL

Examiner

Alyssa M. Alter

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The amendment filed on August 18, 2005 (paper No. 2) has been received and considered. By this amendment, claims 1-43 have been canceled, claim 55 has been added and claims 44-55 are now pending in the application.

Response to Arguments

Applicant's arguments, filed on August 18, 2005, with respect to claims 44-54 have been considered but are moot in view of the new ground(s) of rejection in view of Adolph et al. (US 3,799,147).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 44-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adolph et al. (US 3,799,147). Adolph et al. discloses analysis of the heart sound frequency spectrum. The examiner considers the bandpass filter 40 to filter the frequency into bands, as exhibited by filters 40-1, 40-2, 40-3, 40-4 and 40-5 and the analyzer to be the component that identifies frequency bands for the detection of heart sounds.

"The recorded output of the microphone 10, present on output line 20 of tape recorder 18 and which is input to the dynamic analyzer 30, is also passed through a bandpass filter 40. Filter 40 has a pass band 20 cps wide which can be selectively centered at 30 cps, 40 cps, 50 cps, 60 cps, and 70 cps to produce electrical outputs correlated to the sonic energy of the heart sounds in the bands of 20-40 cps, 30-50 cps, 40-60 cps, 50-70 cps, and 60-80 cps, respectively. For the purpose of clarity, the single, selectively variable center frequency, 20 cps wide bandpass filter 40 is depicted as comprising five separate 20 cps wide bandpass filters 40-1, 40-2, 40-3, 40-4 and 40-5 centered at 30, 40, 50, 60 and 70 cps, respectively, and having output lines 41-1, 41-2, 41-3, 41-4, and 41-5, respectively. Output lines 41-1, 41-2, 41-3, 41-4, and 41-5 are input to the photographic recorder 26, providing visual representations or traces 42, 43, 44, 45, and 46 of the intensity versus time of heart sound energy in the ranges of 20-40 cps, 30-50 cps, 40-60 cps, 50-70 cps, and 60-80 cps, respectively"(col. 6, lines 52-60).

Furthermore, the component that defines a window within each beat is "a multi-channel photographic recorder 26 which functions to provide, in response to the input on line 34, a permanent visual representation or trace 36, referenced to time, of the intensity of the heart sound energy present in the range of 20-220 cps"(col. 6, lines 39-43). The photographic recorder 26 also facilitates in the classification of the filtered data and the identification of heart sounds in the specific frequency band.

Adolph et al. discloses the claimed invention except for the component for the classification of the beats. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a component for the classification of

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beats, instead of a user classifying based on visual representation, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192 (see MPEP 2144.04)

As to claims 45-50, the functional language and introductory statement of intended use of claims 45-50 have been carefully considered but are not considered to impart any further structural limitations over the prior art. Since Adolph et al. utilizes components for the same functions as claimed by the Applicant (see above), Adolph et al. is therefore capable of being used in to detect and classify specific heart sounds and sound data. In addition nothing prevents Adolph et al. from sensing abnormal heart sounds, S3 or S4, and classify beats by reference amplitude or occurrence of heart sound. Therefore, the components are capable of being used for sensing abnormal heart sounds and classify beats as specified by the Applicant.

Specification

1. The disclosure is objected to because of the following informalities: missing Ser. No. ___ in paragraph 26. Appropriate correction is required.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

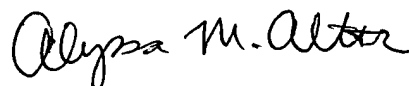
1. Cesmeli (US 6,438,196) discloses utilizes a plurality of frequency bands applied to an EKG signal.

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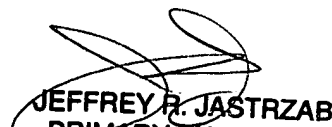
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alyssa M. Alter whose telephone number is (571) 272-4939. The examiner can normally be reached on M-F 9am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alyssa M Alter
Examiner
Art Unit 3762



JEFFREY R. JASTRZAB
PRIMARY EXAMINER
11/14/05